

Exhibit 5

JAMES P. MANDEL, Ph.D.

CERTIFIED PUBLIC ACCOUNTANT

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December 17, 2013

Mr. Jeff Edwards
The Edwards Law Firm
1101 East 11th St.
Austin, Texas 78701

Dear Mr. Edwards:

I have finished an analysis in the **Larry Gene McCollum (Deceased)** case. The results of the analysis, discounted to present value are:

Household Services	
Past	\$11,856
Future	\$274,571
Total	<u>\$286,427</u>

The loss of Household Services is based upon an average of 3.32 hours per day and has been calculated up to life expectancy for Mr. McCollum. If Household Services were based upon an average of 1.00 hour per day the total loss of Household Services (Past and Future) would be \$86,342. Future Household Services were discounted to the present (as of date of trial) by the "below-market discount rate method."

The sources used in the analysis include U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of the Treasury; United States Life Tables, 2008 - National Vital Statistics Reports, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Volume 61, Number 3, September 24, 2012; Handbook of Labor Statistics, U.S. Department of Labor, Bureau of Labor Statistics, Bulletin 1905, 1976; "American Time Use Survey," 2003-07, U.S. Department of Labor, Bureau of Labor Statistics as reported in The Dollar Value of a Day, 2007; and, Occupational Outlook Handbook, 2000-2001 Edition, Bulletin 2520, U.S. Department of Labor, Bureau of Labor Statistics.

I have enclosed copies of the references used as data sources and copies of the spreadsheets that contain the calculations.

In the event I receive additional information, I may revise my report.

If you have any questions, please do not hesitate to contact me.

Sincerely,

James P. Mandel, Ph.D., C.P.A.

Enclosures

	LARRY GENE McCOLLUM		
	(DECEASED)		
			HOUSEHOLD SERVICES*
		PAST	\$11,856
		FUTURE	\$274,571
		TOTAL	\$286,426
	*BASED ON	3.32	AVERAGE HOURS/DAY
			HOUSEHOLD SERVICES**
		TOTAL	\$86,342
	**BASED ON	1.00	AVERAGE HOURS/DAY

LARRY GENE McCOLLUM						
(DECEASED)						
LIFE						
		DOB	4/4/1953			
		DStartHS	8/1/2013			
		DOT	4/7/2014			
		AGE	80.33			
		SELECT	1			
			White			
			Male			
		AGE	LIFE			
		60	21.2			
		61	20.4			
		DELTA:	0.77			
	FRACTION	TIMES	DELTA	INTERP		
	0.33		0.8	0.25		
					LIFE	
	UPPER	LESS	INTERP	EQUALS	EXPECTANCY	
	21.16444		0.25		20.91	YEARS
	YEARS FROM	DStartHS	TO DOT		0.68	
	FUTURE LIFE EXPECTANCY				20.23	YEARS
					FROM	4/7/2014

LARRY GENE McCOLLUM						
(DECEASED)						
LIFE (SPOUSE)						
		DOB	12/12/1953			
		DOT	4/7/2014			
		AGE	60.32			
		SELECT	2			
			White			
			Female			
		AGE	LIFE			
		60	24.0			
		61	23.2			
		DELTA:	0.84			
	FRACTION	TIMES	DELTA	INTERP		
	0.32		0.8	0.27		
					LIFE	
	UPPER	LESS	INTERP	EQUALS	EXPECTANCY	
	24.02518		0.27		23.76	YEARS
					FROM	4/7/2014

LARRY GENE McCOLLUM						
(DECEASED)						
		DECEDANT	SPOUSE			
PER	YEAR	1953	1953	HS/WK	HS/DAY	PER
	2013	60	60	27.9	4.0	
1	2014	61	61	27.9	4.0	1
2	2015	62	62	27.9	4.0	2
3	2016	63	63	27.9	4.0	3
4	2017	64	64	27.9	4.0	4
5	2018	65	65	23.5	3.4	5
6	2019	66	66	23.5	3.4	6
7	2020	67	67	23.5	3.4	7
8	2021	68	68	23.5	3.4	8
9	2022	69	69	23.5	3.4	9
10	2023	70	70	23.5	3.4	10
11	2024	71	71	23.5	3.4	11
12	2025	72	72	23.5	3.4	12
13	2026	73	73	23.5	3.4	13
14	2027	74	74	23.5	3.4	14
15	2028	75	75	23.5	3.4	15
16	2029	76	76	18.9	2.7	16
17	2030	77	77	18.9	2.7	17
18	2031	78	78	18.9	2.7	18
19	2032	79	79	18.9	2.7	19
20	2033	80	80	18.9	2.7	20
21	2034	81	81	18.9	2.7	21
			AVERAGE HS=		3.32	

LARRY GENE McCOLLUM					
(DECEASED)					
PAST HOUSEHOLD SERVICES					
			TOTAL		
YEAR	HOUSEHOLD SERVICES	PCT YEAR	HOUSEHOLD SERVICES	FROM	TO
2013	\$17,236	42%	\$7,181	8/1/2013	12/31/2013
2014	\$17,529	27%	\$4,674	1/1/2014	4/7/2014
		TOTAL=	\$11,856		

LARRY GENE McCOLLUM (DECEASED)

FUTURE HOUSEHOLD SERVICES

REAL INTEREST RATE =	1.56%
REAL GROWTH RATE =	1.03%
REQUIRED INVESTMENT =	\$274,571
ENDING BALANCE =	\$0

YEAR	BEGINNING BALANCE	INTEREST	AMOUNT AVAILABLE	AMOUNT NEEDED	ENDING BALANCE
(ALL AMOUNTS ARE IN CONSTANT DOLLARS)					
1	\$274,571	\$4,283	\$278,854	\$17,413	\$261,441
2	\$261,441	\$4,078	\$265,519	\$17,592	\$247,927
3	\$247,927	\$3,868	\$251,794	\$17,774	\$234,021
4	\$234,021	\$3,651	\$237,671	\$17,957	\$219,715
5	\$219,715	\$3,428	\$223,142	\$15,238	\$207,904
6	\$207,904	\$3,243	\$211,147	\$15,395	\$195,752
7	\$195,752	\$3,054	\$198,806	\$15,554	\$183,252
8	\$183,252	\$2,859	\$186,111	\$15,714	\$170,397
9	\$170,397	\$2,658	\$173,055	\$15,876	\$157,179
10	\$157,179	\$2,452	\$159,631	\$16,039	\$143,592
11	\$143,592	\$2,240	\$145,832	\$16,205	\$129,627
12	\$129,627	\$2,022	\$131,649	\$16,371	\$115,278
13	\$115,278	\$1,798	\$117,076	\$16,540	\$100,536
14	\$100,536	\$1,568	\$102,105	\$16,710	\$85,394
15	\$85,394	\$1,332	\$86,726	\$16,883	\$69,844
16	\$69,844	\$1,090	\$70,933	\$13,712	\$57,221
17	\$57,221	\$893	\$58,114	\$13,853	\$44,261
18	\$44,261	\$690	\$44,951	\$13,996	\$30,955
19	\$30,955	\$483	\$31,438	\$14,140	\$17,298
20	\$17,298	\$270	\$17,568	\$14,286	\$3,282
21	\$3,282	\$12	\$3,294	\$3,293	\$0

Bureau of Labor Statistics

Employment Cost Index					
Original Data Value					
Series Id:		CIU2020000000000A			
Not Seasonally Adjusted					
compensation:		Wages and salaries			
sector:		Private industry			
periodicity:		12-month percent change			
Industryocc:		All workers			
Years:		2001 to 2012			
Year	Qtr1	Qtr2	Qtr3	Qtr4	Annual
2001	3.8	3.6	3.5	3.8	
2002	3.5	3.6	3.1	2.6	
2003	2.9	2.6	3.0	3.1	
2004	2.6	2.7	2.6	2.6	
2005	2.7	2.5	2.3	2.5	
2006	2.4	2.8	3.0	3.2	
2007	3.6	3.3	3.4	3.3	
2008	3.2	3.1	2.9	2.6	
2009	2.0	1.6	1.4	1.3	
2010	1.5	1.6	1.6	1.8	
2011	1.6	1.7	1.7	1.6	
2012	1.9	1.8	1.8	1.7	

Bureau of Labor Statistics

Major Sector Productivity and Costs					
Original Data Value					
Series Id:	PRS85006152				
Sector:	Nonfarm Business				
Measure:	Real hourly compensation				
Duration:	Percent change from previous quarter at annual				
Base Year:	-				
Years:	1947 to 2012				
Year	Qtr1	Qtr2	Qtr3	Qtr4	Annual
1947		1.0	0.0	-1.3	
1948	1.6	-0.6	2.0	9.3	0.5
1949	5.9	-0.7	5.3	0.8	4.2
1950	12.1	4.4	0.4	3.2	4.6
1951	-6.2	3.9	6.3	-0.3	0.7
1952	4.1	2.2	0.8	10.1	3.5
1953	6.0	3.8	2.5	2.8	4.8
1954	2.6	1.1	4.3	5.2	2.4
1955	2.6	4.8	4.7	3.7	4.1
1956	6.3	5.2	2.0	3.3	4.6
1957	2.5	0.6	1.7	3.5	2.4
1958	-3.1	0.6	6.0	3.8	1.1
1959	2.7	3.4	0.6	1.5	3.2
1960	8.3	0.0	2.1	-0.8	2.5
1961	2.8	5.9	1.4	2.3	2.3
1962	5.0	1.1	1.8	2.8	3.0
1963	2.6	1.3	1.6	3.6	2.1
1964	-1.9	3.8	4.4	1.1	1.8
1965	0.4	0.1	3.0	3.8	1.7
1966	3.3	2.7	2.2	2.2	3.0
1967	4.2	4.2	1.6	1.3	2.7
1968	7.5	2.8	1.3	3.0	3.5
1969	0.3	0.1	1.7	1.7	1.3
1970	1.0	1.1	2.7	-1.5	1.4
1971	4.8	2.6	1.8	0.2	1.9
1972	6.6	2.7	2.4	4.1	3.2
1973	4.3	-2.1	-0.1	-1.4	1.8
1974	-2.3	-0.2	0.2	-1.9	-1.2
1975	2.6	3.2	-0.8	0.0	0.9
1976	4.2	4.8	2.4	2.7	2.5
1977	-0.4	0.9	2.3	1.4	1.5
1978	8.1	-4.2	-0.9	1.2	1.7
1979	2.5	-1.7	-1.6	0.0	-0.1
1980	-1.2	0.5	0.7	1.0	-0.4
1981	-0.7	-0.2	0.9	-1.1	0.1
1982	5.3	-0.8	-0.6	0.8	1.0
1983	1.4	-1.3	-1.7	0.4	-0.1
1984	-0.6	0.1	2.3	-0.6	0.0
1985	1.3	-0.4	3.1	3.2	1.0
1986	3.2	6.2	2.3	2.5	3.4

Source: Bureau of Labor Statistics

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Bureau of Labor Statistics

1987	-2.6	-1.5	0.3	1.2	0.2
1988	4.4	0.4	0.3	-1.1	1.3
1989	-2.9	-4.9	0.2	1.9	-1.7
1990	1.3	5.2	-0.4	-2.4	1.1
1991	1.3	6.0	2.1	1.6	1.6
1992	5.7	0.4	3.6	-1.7	2.8
1993	-1.3	-1.2	-0.1	-1.1	-0.5
1994	3.5	-2.6	-3.3	0.6	-0.4
1995	0.6	-0.6	0.1	1.9	-0.3
1996	0.7	0.5	0.7	-1.7	0.6
1997	0.6	2.1	2.0	5.3	0.9
1998	7.3	4.3	4.6	-0.2	4.5
1999	5.5	-2.0	0.3	5.5	2.2
2000	11.4	-2.0	4.7	-0.2	3.9
2001	5.6	-1.6	0.0	4.5	1.7
2002	2.9	0.3	0.1	-0.4	1.5
2003	2.2	7.7	2.7	1.7	2.4
2004	-5.1	2.7	3.3	-0.6	0.6
2005	1.5	-0.2	-0.4	-1.3	0.6
2006	3.6	-2.0	-2.8	11.7	0.5
2007	-0.2	-3.1	0.2	1.3	1.1
2008	1.5	-6.1	-3.0	12.2	-0.4
2009	-0.4	4.4	-1.6	-2.2	1.8
2010	0.9	3.1	0.2	-2.6	0.4
2011	5.2	-5.0	-3.8	-2.4	-0.6
2012	3.4	0.2	-0.9	0.4	-0.6

Bureau of Labor Statistics

Consumer Price Index - All Urban Consumers					
Original Data Value					
Series Id:		CUUR0000SA0,CUUS0000SA0			
Not Seasonally Adjusted					
Area:		U.S. city average			
Item:		All items			
Base Period:		1982-84=100			
Years:		1935 to 2012			
Year	Annual				
1936	13.7				
1936	13.9				
1937	14.4				
1938	14.1				
1939	13.9				
1940	14.0				
1941	14.7				
1942	16.3				
1943	17.3				
1944	17.6				
1945	18.0				
1946	19.5				
1947	22.3				
1948	24.1				
1949	23.8				
1950	24.1				
1951	26.0				
1952	26.5				
1953	26.7				
1954	26.9				
1955	26.8				
1956	27.2				
1957	28.1				
1958	28.9				
1959	29.1				
1960	29.6				
1961	29.9				
1962	30.2				
1963	30.6				
1964	31.0				
1965	31.5				
1966	32.4				
1967	33.4				
1968	34.8				
1969	36.7				
1970	38.8				
1971	40.5				
1972	41.8				
1973	44.4				
1974	49.3				

Source: Bureau of Labor Statistics

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Bureau of Labor Statistics

1975	53.8				
1976	56.9				
1977	60.6				
1978	65.2				
1979	72.6				
1980	82.4				
1981	90.9				
1982	96.5				
1983	99.6				
1984	103.9				
1985	107.6				
1986	109.6				
1987	113.6				
1988	118.3				
1989	124.0				
1990	130.7				
1991	136.2				
1992	140.3				
1993	144.5				
1994	148.2				
1995	152.4				
1996	156.9				
1997	160.5				
1998	163.0				
1999	166.6				
2000	172.2				
2001	177.1				
2002	179.9				
2003	184.0				
2004	188.9				
2005	195.3				
2006	201.6				
2007	207.342				
2008	215.303				
2009	214.537				
2010	218.056				
2011	224.939				
2012	229.594				

TABLE B-73. Bond yields and interest rates, 1941-2012
(Percent per annum)

Year and month	U.S. Treasury securities					Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields ⁴	Prime rate charged by banks ⁵	Discount window (Federal Reserve Bank of New York) ^{6,7}		Federal funds rate ⁷
	Bills (at auction) ¹		Constant maturities ²			Aaa ³	Baa				Primary credit	Adjustment credit	
	3-month	6-month	3-year	10-year	30-year								
1941.	0.103	.....	.....	.....	.....	2.77	4.33	2.10	.....	1.50	.....	1.00	.....
1942.	.328	.....	.....	.....	.....	2.83	4.28	2.36	.....	1.50	.....	1.00	.....
1943.	.373	.....	.....	.....	.....	2.73	3.91	2.08	.....	1.50	.....	1.00	.....
1944.	.375	.....	.....	.....	.....	2.72	3.61	1.98	.....	1.50	.....	1.00	.....
1945.	.375	.....	.....	.....	.....	2.62	3.29	1.87	.....	1.50	.....	1.00	.....
1946.	.375	.....	.....	.....	.....	2.53	3.05	1.84	.....	1.50	.....	1.00	.....
1947.	.594	.....	.....	.....	.....	2.81	3.24	2.01	.....	1.50-1.75	.....	1.00	.....
1948.	1.040	.....	.....	.....	.....	2.82	3.47	2.40	.....	1.75-2.00	.....	1.34	.....
1949.	1.102	.....	.....	.....	.....	2.68	3.42	2.21	.....	2.00	.....	1.50	.....
1950.	1.219	.....	.....	.....	.....	2.82	3.24	1.98	.....	2.07	.....	1.59	.....
1951.	1.552	.....	.....	.....	.....	2.86	3.41	2.00	.....	2.58	.....	1.75	.....
1952.	1.786	.....	.....	.....	.....	2.96	3.52	2.19	.....	3.00	.....	1.75	.....
1953.	1.931	.....	2.47	2.85	.....	3.20	3.74	2.72	.....	3.17	.....	1.99	.....
1954.	.953	.....	1.83	2.40	.....	2.90	3.51	2.37	.....	3.05	.....	1.60	.....
1955.	1.753	.....	2.47	2.82	.....	3.06	3.63	2.53	.....	3.16	.....	1.68	1.79
1956.	2.658	.....	3.19	3.18	.....	3.36	3.88	2.93	.....	3.77	.....	2.77	2.73
1957.	3.297	.....	3.98	3.65	.....	3.69	4.71	3.60	.....	4.20	.....	3.12	3.11
1958.	1.839	.....	2.84	3.32	.....	3.79	4.73	3.56	.....	3.83	.....	2.15	1.57
1959.	3.405	3.832	4.46	4.33	.....	4.38	5.05	3.85	.....	4.48	.....	3.30	3.31
1960.	2.93	3.28	3.85	4.12	.....	4.41	5.15	3.73	.....	4.82	.....	3.53	3.21
1961.	2.38	2.81	3.54	3.86	.....	4.35	5.08	3.48	.....	4.50	.....	3.00	1.95
1962.	2.78	2.91	3.47	3.95	.....	4.33	5.02	3.18	.....	4.50	.....	3.00	2.71
1963.	3.16	3.25	3.67	4.00	.....	4.28	4.86	3.23	5.89	4.50	.....	3.23	3.18
1964.	3.56	3.69	4.03	4.19	.....	4.40	4.83	3.22	6.83	4.50	.....	3.55	3.50
1965.	3.95	4.05	4.22	4.28	.....	4.49	4.87	3.27	5.61	4.54	.....	4.04	4.07
1966.	4.68	5.08	5.23	4.93	.....	5.13	5.07	3.82	6.25	5.83	.....	4.50	5.11
1967.	4.32	4.63	5.03	5.07	.....	5.51	6.23	3.88	6.48	5.83	.....	4.19	4.22
1968.	5.34	5.47	5.68	5.64	.....	6.18	6.94	4.51	6.97	6.31	.....	5.17	5.86
1969.	6.68	6.85	7.02	6.67	.....	7.03	7.81	6.81	7.61	7.98	.....	5.87	8.21
1970.	6.43	6.53	7.29	7.35	.....	8.04	9.11	6.51	8.45	7.91	.....	5.95	7.17
1971.	4.35	4.51	5.86	6.16	.....	7.38	8.66	6.70	7.74	5.73	.....	4.58	4.97
1972.	4.07	4.47	5.72	6.21	.....	7.21	8.18	5.27	7.60	5.25	.....	4.50	4.44
1973.	7.04	7.18	6.96	6.85	.....	7.44	8.24	5.18	7.96	6.03	.....	6.45	8.74
1974.	7.89	7.93	7.84	7.56	.....	8.57	9.50	6.09	8.92	10.81	.....	7.83	10.51
1975.	5.84	6.12	7.50	7.99	.....	8.83	10.61	6.89	9.00	7.86	.....	6.25	5.82
1976.	4.99	5.27	6.77	7.61	.....	8.43	9.75	6.49	9.00	6.84	.....	5.50	5.05
1977.	5.27	5.52	6.88	7.42	7.75	8.02	8.97	5.56	9.02	6.83	.....	5.48	5.54
1978.	7.22	7.58	8.29	8.41	8.49	8.73	9.48	5.90	9.58	9.06	.....	7.46	7.94
1979.	10.05	10.02	9.70	9.43	9.26	9.83	10.89	6.39	10.78	12.67	.....	10.29	11.20
1980.	11.51	11.37	11.51	11.43	11.27	11.94	13.67	6.51	12.68	15.26	.....	11.77	13.35
1981.	14.03	13.78	14.48	13.92	13.45	14.17	16.04	11.23	14.70	18.87	.....	13.42	16.39
1982.	10.89	11.08	12.93	13.01	12.78	13.78	15.11	11.57	15.14	14.85	.....	11.01	12.24
1983.	8.63	8.78	10.45	11.10	11.15	12.04	13.55	9.47	12.57	10.78	.....	8.60	9.09
1984.	9.53	9.77	11.92	12.46	12.41	12.71	14.19	10.15	12.58	12.04	.....	8.80	10.23
1985.	7.47	7.84	9.84	10.62	10.79	11.37	12.72	9.18	11.55	9.93	.....	7.69	8.10
1986.	5.98	6.03	7.06	7.57	7.75	9.02	10.39	7.38	10.17	8.33	.....	6.32	6.80
1987.	5.82	6.05	7.66	8.39	8.59	9.38	10.59	7.73	9.31	8.21	.....	6.86	6.68
1988.	6.68	6.92	8.26	8.85	8.95	9.71	10.83	7.76	9.18	9.32	.....	6.20	7.57
1989.	8.12	8.04	8.55	8.49	8.45	9.26	10.18	7.24	10.13	10.67	.....	6.93	9.21
1990.	7.51	7.47	8.26	8.55	8.51	9.32	10.38	7.25	10.05	10.01	.....	6.95	8.10
1991.	5.42	5.46	6.82	7.66	8.14	8.77	9.80	6.89	9.32	8.48	.....	5.45	5.89
1992.	3.45	3.57	5.30	7.01	7.87	8.14	8.98	6.41	8.24	6.25	.....	3.25	3.52
1993.	3.02	3.14	4.44	5.87	6.58	7.22	7.93	5.63	7.20	6.00	.....	3.00	3.02
1994.	4.29	4.66	6.27	7.09	7.37	7.96	8.82	6.18	7.49	7.15	.....	3.60	4.21
1995.	5.51	5.59	6.25	6.57	6.88	7.59	8.20	5.95	7.87	6.83	.....	5.21	5.83
1996.	5.02	5.09	5.98	6.44	6.71	7.37	8.05	5.75	7.80	8.27	.....	5.02	5.30
1997.	5.07	5.16	6.10	6.35	6.61	7.26	7.86	5.65	7.71	8.44	.....	5.00	5.48
1998.	4.81	4.85	5.14	5.26	5.58	6.53	7.22	5.12	7.07	6.38	.....	4.92	5.35
1999.	4.86	4.76	5.49	5.65	5.87	7.04	7.87	5.43	7.04	6.00	.....	4.82	4.97
2000.	5.85	5.92	6.22	6.03	5.94	7.62	8.30	5.77	7.52	9.23	.....	5.73	6.24
2001.	3.44	3.39	4.09	5.02	5.49	7.06	7.95	5.19	7.00	6.91	.....	3.40	3.68
2002.	1.82	1.69	3.10	4.81	5.43	6.49	7.80	5.05	6.43	4.87	.....	1.17	1.67
2003.	1.01	1.06	2.10	4.01	.....	5.67	6.77	4.73	5.80	4.12	2.12	.....	1.13
2004.	1.38	1.57	2.78	4.27	.....	5.63	6.39	4.63	5.77	4.34	2.34	.....	1.35
2005.	3.16	3.40	3.93	4.29	.....	5.24	6.06	4.29	5.94	6.19	4.19	.....	3.22
2006.	4.73	4.80	4.77	4.80	4.91	5.59	6.48	4.42	6.83	7.98	6.86	.....	4.97
2007.	4.41	4.40	4.35	4.53	4.84	5.56	6.48	4.42	6.41	8.06	8.88	.....	5.02
2008.	1.48	1.71	2.24	3.66	4.25	5.63	7.45	4.90	6.06	5.09	2.39	.....	1.92
2009.	.16	.28	1.43	3.25	4.00	5.31	7.30	4.64	5.14	3.25	.50	.....	.16
2010.	.14	.20	1.11	3.22	4.25	4.94	6.04	4.18	4.50	3.25	.72	.....	.18
2011.	.06	.10	.75	2.78	3.91	4.84	5.86	4.28	4.56	3.25	.75	.....	.10
2012.	.09	.13	.36	1.80	2.92	3.87	4.94	3.14	3.69	3.25	.75	.....	.14

¹ High bill rate at auction, issue date within period, bank-discount basis. On or after October 28, 1998, data are stop yields from uniform-price auctions. Before that date, they are weighted average yields from multiple-price auctions.

See next page for continuation of table.



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

SUMMARY OF TREASURY INFLATION-INDEXED SECURITIES

The Treasury Department has finalized rules setting out the terms and conditions for the new Inflation-Indexed Securities that will be auctioned in January 1997. The final rules, which will be published in the Federal Register, adopt without substantive change the proposed rules that were published for comment on September 27, 1996. Eight comment letters were received in response to the proposed rules. The following is a summary of the key provisions of the final rules and features of the new securities.

- The inflation-indexed securities will be structured similarly to the Real Return Bonds issued by the Government of Canada.
- The interest rate, which is set at auction, will remain fixed throughout the term of the security.
- The principal amount of the security will be adjusted for inflation, but the inflation-adjusted principal will not be paid until maturity.
- Semiannual interest payments will be based on the inflation-adjusted principal at the time the interest is paid.
- The index for measuring the inflation rate will be the non-seasonally adjusted U.S. City Average All Items Consumer Price Index for All Urban Consumers (CPI-U), published monthly by the Bureau of Labor Statistics (BLS).
- The auction process will use a single price auction method that is the same as that currently used for 2-year and 5-year Treasury notes.
- The securities will be eligible for stripping into their principal and interest components in Treasury's Separate Trading of Registered Interest and Principal of Securities (STRIPS) program.
- At maturity, the securities will be redeemed at the greater of their inflation-adjusted principal or par amount at original issue. The payment of an additional amount at maturity, if necessary, to ensure that the inflation-adjusted principal plus the additional amount equals the par amount at original issuance is different than the minimum guarantee provision that Treasury was considering in the Advance Notice of Proposed Rulemaking.
- The first auction of inflation-indexed securities, a 10-year note, will be held in January 1997, and quarterly thereafter.
- If, while an inflation-indexed security is outstanding, the CPI is (1) discontinued, (2) in the judgment of the Secretary, fundamentally altered in a manner materially adverse to the interests of an investor in the security, or (3) in the judgment of the Secretary, altered by legislation or Executive Order in a manner materially adverse to the interests of an investor in the security, Treasury, after consulting with the BLS, will substitute an appropriate alternative index.
- Regulations addressing the tax treatment of inflation-indexed securities will be issued by the IRS shortly. Generally, the interest payments will be taxable when received, which is consistent with the tax treatment of other Treasury securities. The inflation adjustments to the principal will be taxable in the year in which such adjustments occur even though the inflation adjustments will not be paid until maturity.

December 30, 1996

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at the kindergarten, elementary, and secondary school levels. Some workers set up their own child-care businesses.

Job Outlook

Employment of preschool teachers and child-care workers is projected to increase faster than the average for all occupations through the year 2008. In addition, many preschool teachers and child-care workers leave the occupation each year for other jobs, family responsibilities, or other reasons. High turnover, combined with job growth, is expected to create many openings for preschool teachers and child-care workers. Qualified persons who are interested in this work should have little trouble finding and keeping a job.

Future employment growth of preschool teachers and child-care workers will be rapid, but nevertheless considerably slower than in the last two decades because demographic changes that fueled much of the past enrollment growth are projected to slow. Labor force participation of women of childbearing age will increase very little and this group of women will decline as a percentage of the total labor force. Also, the number of children under 5 years of age is expected to rise very little by the year 2008. Nevertheless, the proportion of youngsters enrolled full- or part-time in child-care and preschool programs is likely to continue to increase, spurring demand for preschool teachers and child-care workers. Changes in perceptions of preprimary education may lead to increased public and private spending on child care. If more parents believe that some experience in center-based care and preschool is beneficial to children, enrollment will increase. Government policy often favors increased funding of early childhood education programs and that trend should continue. The growing availability of government-funded programs may induce some parents to enroll their children in center-based care and preschool who otherwise would not. Some States also are increasing subsidization of the child-care services industry in response to welfare reform legislation. This reform may cause some mothers to enter the work force during the projection period as their welfare benefits are reduced or eliminated.

Earnings

Pay depends on the educational attainment of the worker and establishment type. Although the pay is generally very low, more education means higher earnings in some cases. Median annual earnings of preschool teachers were \$17,310 in 1998. The middle 50 percent earned between \$13,760 and \$22,370. The lowest 10 percent earned less than \$12,000 and the highest 10 percent earned more than \$30,310. Median annual earnings in the industries employing the largest numbers of preschool teachers in 1997 were as follows:

Elementary and secondary schools	\$23,300
Individual and family services	18,800
Social services, not elsewhere classified	17,900
Civic and social associations	17,300
Child day care services	15,700

Median hourly earnings of child-care workers were \$6.61 in 1998. The middle 50 percent earned between \$5.82 and \$8.13. The lowest 10 percent earned less than \$5.49 and the highest 10 percent earned more than \$9.65. Median hourly earnings in the industries employing the largest numbers of child-care workers in 1997 were as follows:

Residential care	\$7.60
Elementary and secondary schools	7.30
Clubs and social associations	6.30
Child day care services	6.00
Miscellaneous amusement and recreation services	5.90

Earnings of self-employed child-care workers vary depending on the hours worked, number and ages of the children, and the location.

Benefits vary, but are minimal for most preschool and child-care workers. Many employers offer free or discounted child care to employees. Some offer a full benefits package, including health insurance and paid vacations, but others offer no benefits at all. Some employers

offer seminars and workshops to help workers improve upon or learn new skills. A few are willing to cover the cost of courses taken at community colleges or technical schools.

Related Occupations

Child-care work requires patience; creativity; an ability to nurture, motivate, teach, and influence children; and leadership, organizational, and administrative skills. Others who work with children and need these aptitudes include teacher assistants, children's tutors, kindergarten and elementary school teachers, early childhood program directors, and child psychologists.

Sources of Additional Information

For information on careers in educating children and issues affecting preschool teachers and child-care workers, contact:

- National Association for the Education of Young Children, 1509 16th St. NW., Washington, DC 20036. Internet: <http://www.naeyc.org>
- Association for Childhood Education International, 17904 Georgia Ave., Suite 215, Olney, MD 20832-3277.

For eligibility requirements and a description of the Child Development Associate credential, contact:

- Council for Early Childhood Professional Recognition, 2460 16th St. NW., Washington, DC 20009. Internet: <http://www.edacouncil.org>

For information about family child care and accreditation, contact:

- National Association for Family Child Care, 325 SW 5th St., Suite A, Des Moines, Iowa 50309-4501. Internet: <http://www.nafcc.org>

For information on salaries and efforts to improve compensation in child care, contact:

- Center for the Child Care Workforce, 733 15th St. NW., Suite 1037, Washington, DC 20005. Internet: <http://www.cccw.org>

State Departments of Human Services or Social Services can supply State regulations and training requirements for child-care workers.

Private Household Workers

(O*NET 62031, 62041, 62061, 69999E, and 79999N)

Significant Points

- Demand will far outstrip the supply of workers willing to provide private household services because the work is hard, earnings are low, and benefits and advancement opportunities are few.
- Persons who are interested in and suited for this work should have no trouble finding and keeping jobs.

Nature of the Work

Private household workers clean homes, care for children, plan and cook meals, do laundry, administer the household, and perform numerous other duties. Many types of households of various income levels employ these workers. Although wealthy families may employ a large staff, it is much more common for one worker to be employed in a household where both parents work. Many workers are employed in households having one parent. A number of household workers work part time for two or more employers.

Most household workers are *general house workers* and usually the only worker employed in the home. They dust and polish furniture; sweep, mop, and wax floors; vacuum; and clean ovens, refrigerators, and bathrooms. They may also wash dishes, polish silver, and change and make beds. Some wash, fold, and iron clothes; a few wash windows. Other duties may include looking after a child or an elderly person, cooking, feeding pets, answering the telephone and doorbell, and calling and waiting for repair workers. General house workers may also take clothes and laundry to the cleaners, buy groceries, and do many other errands.

Household workers whose primary responsibility is taking care of children are called *child-care workers*. Those employed on an hourly

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basis are usually called *baby-sitters*. Child-care workers bathe, dress, and feed children; supervise their play; wash their clothes; and clean their rooms. They may also put them to sleep and waken them, read to them, involve them in educational games, take them for doctors' visits, and discipline them. Those who are in charge of infants, sometimes called *infant nurses*, also prepare bottles and change diapers.

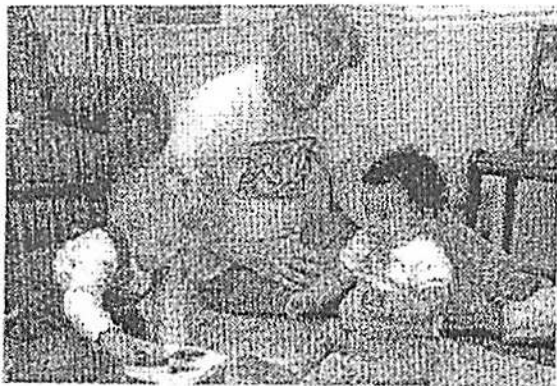
Nannies generally take care of children from birth to age 10 or 12, tending to the child's early education, nutrition, health, and other needs. They may also perform the duties of a general housekeeper, including general cleaning and laundry duties. *Governesses* look after children in addition to other household duties. They may help them with schoolwork, teach them a foreign language, and guide them in their general upbringing. (Child-care workers who work outside the child's home are covered in the statement on child-care workers elsewhere in the *Handbook*.)

Companions or personal attendants assist elderly, handicapped, or convalescent people. Depending on the employer's needs, a companion or attendant might help with bathing and dressing, preparing and serving meals, and keeping the house tidy. They also may read to their employers, write letters for them, play cards or games, and go with them on walks and outings. Companions may also accompany their employers to medical appointments and handle their social and business affairs.

Households with a large staff may include a household manager, housekeeper, or butler, as well as a cook, caretaker, and launderer. *Household managers, housekeepers, and butlers* hire, supervise, and coordinate the household staff to keep the household running smoothly. Butlers also receive and announce guests, answer telephones, deliver messages, serve food and drinks, chauffeur, or act as a personal attendant. *Cooks* plan and prepare meals, clean the kitchen, order groceries and supplies, and may also serve meals. *Caretakers* do heavy housework and general home maintenance. They wash windows, wax floors, and hang draperies. They maintain heating and other equipment and do light carpentry, painting, and odd jobs. They may also mow the lawn and do some gardening if the household does not have a gardener.

Working Conditions

Private household workers usually work in pleasant and comfortable homes or apartments. Most are day workers who live in their own homes and travel to work. Some live in the home of their employer, generally with their own room and bath. Live-ins usually work longer hours. However, if they work evenings or weekends, they may get other time off. Live-ins may feel isolated from family and friends. On the other hand, they often become part of their employer's family, and may derive satisfaction from caring for them. Being a general house worker can also be isolating, since work is usually done alone.



Many private household workers supervise children.

Housekeeping is hard work. Both day workers and live-ins are on their feet most of the day and do much walking, lifting, bending, stooping, and reaching. In addition, some employers may be very demanding.

Employment

Private household workers held about 928,000 jobs in 1998. About 65 percent were cleaners and servants, mostly day workers; about 33 percent were child-care workers, including baby sitters; and less than 3 percent were housekeepers, butlers, cooks, and laundresses. Most jobs are in big cities and their affluent suburbs. Some are on large estates or in resorts away from cities.

Training, Other Qualifications, and Advancement

Private household workers generally do not need any special training. Individuals who cannot find other work because of limited language or other skills often turn to this work. Most jobs require the ability to clean, cook, or take care of children. These skills are generally learned by young people while helping with housework at home. Some training takes place on the job. Employers show the household workers what they want done and how. For child-care workers and companions, general education and the ability to get along with the person they will care for are most important.

Home economics courses in high schools and vocational and adult education schools offer training in cooking and child care. Courses in child development, first aid, and nursing in postsecondary schools are highly recommended.

Schools for butlers, nannies, and governesses teach household administration, early childhood education, nutrition, child care, and bookkeeping. These schools may offer certifications in household management—for example, Certified Household Manager, Certified Professional Nanny, or Certified Professional Governess—and assist in job placement. However, most private household workers get jobs through employment agencies and recommendations from previous employers.

Private household workers should work well with others and be honest, discreet, dependable, courteous, and neat. They also need physical stamina.

There are very few opportunities for advancement within this occupation. Few large households exist with big staffs where general house workers can advance to cook, executive housekeeper, butler, or governess, and these jobs may require specialized training. Advancement usually consists of better pay and working conditions. Workers may move to similar jobs in hotels, hospitals, and restaurants, where the pay and benefits are usually better. A few workers start companies that provide household services for a fee. Others transfer into better-paying, unrelated jobs.

Job Outlook

Job opportunities for people wishing to become private household workers are expected to be excellent through 2008, as the demand for these services continues to far outpace the supply of workers willing to provide them. Those with formal training or excellent recommendations from previous employers should be particularly sought after.

For many years, demand for household help has outstripped the supply of workers willing to take domestic jobs. The imbalance is expected to persist, and possibly worsen. Demand is expected to grow as more women join the labor force and need help running their households. Demand for companions and personal attendants is also expected to rise due to projected rapid growth in the elderly population.

The supply situation is not likely to improve. The physical demands of the work, low status, low pay, few benefits, and limited advancement potential deter many prospective household workers. Due to the limited supply of household workers, many employers have turned to domestic cleaning firms, child-care centers, and temporary help firms to meet their needs for household help. This trend is expected

to continue. (See the statements on janitors and cleaners, preschool teachers and child-care workers, and home health and personal care aides elsewhere in the *Handbook*.)

Employment of private household workers is expected to decline through 2008. However, job openings will be numerous because of the need to replace workers who change jobs within the occupation and the large number of workers who leave these occupations every year. Persons who are interested in and suited for this work should have no trouble finding and keeping jobs.

Earnings

Earnings of private household workers depend on the type of work, the number of hours, household and staff size, geographic location, training, and experience.

Most private household workers are employed part time, or less than 35 hours a week. Some work only 2 or 3 days a week while others may work half a day 4 or 5 days a week. Earnings vary from about \$10 an hour or more in a big city to less than the Federal minimum wage—\$5.15 an hour in 1998. (Minimum wage laws may not cover private household workers who work just a few hours per week or have very low annual earnings.) In addition, day workers often get carfare and a free meal. Live-in domestics usually earn more than day workers and also get free room and board. However, they often work longer hours. Baby-sitters usually have the lowest earnings.

Usual median weekly earnings of all private household workers in 1998 were \$223. Cleaners and servants earned \$235 per week, cooks earned \$380 per week, child-care workers earned \$204 per week, and housekeepers and butlers earned \$206 per week. Some full-time live-in housekeepers, cooks, butlers, nannies, and governesses earned considerably more. Based on limited information, experienced and highly recommended workers employed by wealthy families in major metropolitan areas may earn \$800 to \$1,200 a week.

Private household workers who live with their employers may be given room and board, medical benefits, a car, vacation days, and education benefits. However, most private household workers receive very limited or no benefits.

Related Occupations

Other workers with similar duties are building custodians, hotel and restaurant cleaners, child-care workers, home health and personal care aides, cooks, kitchen workers, waiters and waitresses, and bartenders.

Sources of Additional Information

Information about job opportunities for private household workers is available from local private employment agencies and State employment service offices.

For information about careers and schools offering training for nannies, contact:

• American Council of Nanny Schools, Delta College, University Center, MI 48710.

Veterinary Assistants and Nonfarm Animal Caretakers

(O*NET 34058G, 79017A, 79017B, 79017C, 79017D, and 79806)

Significant Points

- Animal lovers get satisfaction in this occupation, but aspects of the work can be unpleasant and physically and emotionally demanding.
- Most animal caretakers are trained on the job, but advancement depends on experience, formal training, and continuing education.

Nature of the Work

Many people like animals. But, as pet owners can attest, taking care of them is hard work. Animal caretakers, sometimes called animal attendants or animal keepers, feed, water, groom, bathe, and exercise animals and clean, disinfect, and repair their cages. They also play with the animals, provide companionship, and observe behavioral changes that could indicate illness or injury.

Boarding kennels, animal shelters, veterinary hospitals and clinics, stables, laboratories, aquariums, and zoological parks all house animals and employ caretakers. Job titles and duties vary by employment setting.

Kennel staff usually care for small companion animals like dogs and cats while their owners are working or traveling out of town. Beginning attendants perform basic tasks, such as cleaning cages and dog runs, filling food and water dishes, and exercising animals. Experienced attendants may provide basic animal health care, as well as bathe animals, trim nails, and attend to other grooming needs. Caretakers who work in kennels may also sell pet food and supplies, assist in obedience training, help with breeding, or prepare animals for shipping.

Animal caretakers who specialize in grooming, or maintaining a pet's—usually a dog's or cat's—appearance are called groomers. Some groomers work in kennels, veterinary clinics, animal shelters, or pet supply stores. Others operate their own grooming business. Groomers answer telephones, schedule appointments, discuss with clients their pets' grooming needs, and collect information on the pet's disposition and its veterinarian. Groomers are often the first to notice a medical problem, such as an ear or skin infection, that requires veterinary care.

Grooming the pet involves several steps: An initial brush-out is followed by a first clipping of hair or fur using electric clippers, combs, and grooming shears; the groomer then cuts the nails, cleans the ears,



An animal caretaker enjoys feeding a seal.

Expectancy Data
Economic Demographers

The Dollar Value of a Day

Time Diary Analysis

2007 Dollar Valuation

Expectancy Data Economic Demographics

Table 18. All married retired males, under age 65

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours			Participation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home		
Inside Housework	2.15	\$10.91	\$3.35	0.05	0.99	1.99	21.8%	11.2%
Food Cooking & Clean-up	2.66	10.63	4.04	0.10	1.16	2.39	42.2	5.6
Pets, Home & Vehicles	12.83	12.75	23.36	0.14	2.87	12.01	55.6	4.3
Household Management	2.56	15.89	5.81	0.08	0.55	2.03	28.0	10.4
Shopping	3.61	12.04	6.04	0.03	2.07	0.33	46.2	4.9
Obtaining Services	0.68	13.78	1.34	0.00	0.03	0.60	4.0	31.9
Travel for Household Activity	2.65	12.48	4.73	0.02	1.55	0.01	51.0	4.9
Household Production	27.04	12.60	49.66	0.41	9.23	19.36	86.8	3.0
Household Children	0.37	11.56	0.61	n/a	0.35	0.29	2.7	18.1
Household Adults	0.60	11.74	1.01	0.00	0.53	0.10	6.6	31.2
Non-Household Members	2.63	11.91	4.48	0.00	2.00	0.82	20.2	11.1
Travel for Household Members	0.29	13.88	0.57	0.00	0.22	0.00	5.6	14.7
Travel for Non-Household Members	0.85	13.88	1.69	0.00	0.43	0.00	16.3	6.2
Caring and Helping	4.74	12.33	8.36	0.01	3.54	1.21	28.1	7.9
Eating & Drinking	9.57	12.11	16.56	0.14	6.96	6.83	97.1	2.1
Personal Health Care	1.96	11.53	3.24	0.00	1.06	1.44	14.1	15.6
Grooming	3.16	11.72	5.29	0.04	n/a	n/a	65.7	3.1
Sleeping	61.04	12.49	108.82	n/a	n/a	n/a	100.0	1.4
Private, Personal, or N/A	2.27	13.17	4.27	0.00	0.81	0.80	24.0	9.4
Personal Time	78.01	12.41	138.27	0.18	8.64	8.07	100.0	1.9
Socializing	6.87	12.99	10.89	0.10	4.84	2.45	44.1	5.6
Passive Leisure	40.14	11.47	65.77	0.55	21.82	39.03	97.8	2.1
Active Leisure	4.48	11.47	7.35	0.00	0.86	0.31	26.8	7.9
Attendance Leisure	0.91	11.47	1.49	0.01	0.81	0.00	5.1	8.8
Religious Activities	0.84	15.41	1.65	0.02	0.46	0.07	7.3	7.0
Volunteering	1.99	15.41	4.37	0.00	0.30	0.56	9.8	8.0
Travel Related to Leisure	3.62	12.48	6.45	0.06	2.15	0.05	58.6	5.0
Leisure	57.85	11.88	98.18	0.76	31.26	42.46	99.0	1.9
Working at Job	0.28	46.14	1.88	0.02	0.00	0.27	0.9	18.0
Educational Activities	0.03	14.87	0.06	0.00	0.00	0.03	0.4	30.2
Commuting to Work or School	0.05	12.48	0.09	0.00	0.00	0.00	1.5	13.4
Work and Education	0.37	38.83	2.03	0.02	0.00	0.30	2.2	27.5
Total	168.00	12.31	295.50	1.38	62.86	72.41		
Size of U.S. Population in 2003-2007	2,102,519				Average Age	60.1		
ATUS Respondents in 2003-2007	524				5th Percentile Age	53		
Sunday Respondents	129				95th Percentile Age	64		
Weekday Respondents	273				Household Size	2.4		
Saturday Respondents	122				Number of Adults	2.2		
					Number of Children under Age 18	0.2		
Definitions								
Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.								
Hourly Value: See tables 91-117.								
Dollar Value of a Day: Weekly hours times hourly value divided by seven.								
Secondary Child Care: While performing a primary activity, at least one child under age 13 was in the respondent's care.								
With Family: At least one family member was in the room or accompanied the respondent.								
At Home: The respondent was inside or outside his or her own home.								
Participation Rate: Percent of population reporting at least one daily episode of the activity.								
Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.								
Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal activities, and limited coding while working at job.								

The Dollar Value of a Day, 2007

Table 19. All married retired males, ages 65 to 75

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours			Participation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home		
Inside Housework	1.77	\$10.91	\$2.78	0.00	0.76	1.89	22.3%	6.0%
Food Cooking & Clean-up	2.45	10.63	3.72	0.03	1.34	2.38	42.6	3.3
Pets, Home & Vehicles	9.95	12.75	18.13	0.02	1.60	9.08	52.9	2.9
Household Management	1.92	15.89	4.36	0.00	0.74	1.59	30.9	6.4
Shopping	3.28	12.04	5.81	0.00	2.05	0.11	43.1	3.7
Obtaining Services	0.64	13.78	1.08	0.00	0.14	0.40	5.5	12.5
Travel for Household Activity	2.60	12.48	4.64	0.00	1.50	0.02	50.1	3.6
Household Production	22.50	12.53	40.28	0.05	8.13	15.24	87.1	1.9
Household Children	0.15	11.56	0.25	n/a	0.14	0.12	1.3	17.3
Household Adults	0.68	11.74	1.14	0.00	0.61	0.36	9.7	12.6
Non-Household Members	1.36	11.91	2.32	0.00	1.00	0.41	14.7	7.8
Travel for Household Members	0.28	13.88	0.58	0.00	0.20	0.01	6.7	7.3
Travel for Non-Household Members	0.51	13.88	1.01	0.00	0.29	0.00	11.8	5.2
Caring and Helping	2.98	12.38	5.29	0.00	2.24	0.80	24.1	4.9
Eating & Drinking	10.28	12.11	17.79	0.07	8.05	7.79	88.5	1.2
Personal Health Care	2.01	11.53	3.31	0.01	0.74	1.15	17.0	9.8
Grooming	3.10	11.72	5.20	0.02	n/a	n/a	60.6	2.1
Sleeping	61.65	12.49	110.00	n/a	n/a	n/a	100.0	1.0
Private, Personal, or N/A	2.65	13.17	4.98	0.01	0.85	0.84	26.4	6.0
Personal Time	79.69	12.41	141.28	0.11	9.64	9.78	100.0	1.3
Socializing	5.98	12.99	11.10	0.06	4.39	2.80	47.6	3.6
Passive Leisure	46.24	11.47	75.77	0.27	24.75	45.00	97.7	1.3
Active Leisure	3.28	11.47	5.34	0.00	0.93	0.85	24.6	5.1
Attendance Leisure	0.78	11.47	1.27	0.00	0.63	0.04	5.0	5.8
Religious Activities	1.33	15.41	2.92	0.02	1.01	0.13	11.2	5.4
Volunteering	1.33	15.41	2.93	0.00	0.28	0.52	8.8	6.0
Travel Related to Leisure	3.68	12.48	6.57	0.01	2.51	0.05	55.1	3.1
Leisure	62.60	11.84	105.90	0.36	34.50	48.18	89.5	1.2
Working at Job	0.17	53.66	1.31	0.00	0.00	0.06	0.7	23.8
Educational Activities	0.00	14.87	0.00	0.00	0.00	0.00	0.0	0.0
Commuting to Work or School	0.05	12.48	0.09	0.00	0.01	0.00	1.5	19.8
Work and Education	0.22	44.14	1.40	0.00	0.01	0.06	1.8	25.6
Total	188.00	12.28	284.14	0.51	54.51	75.16		
Size of U.S. Population in 2003-2007	4,569,648				Average Age	70.0		
ATUS Respondents in 2003-2007	1,241				5th Percentile Age	65		
Sunday Respondents	306				95th Percentile Age	75		
Weekday Respondents	656				Household Size	2.2		
Saturday Respondents	279				Number of Adults	2.1		
					Number of Children under Age 18	0.1		
Definitions								
Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.								
Hourly Value: See tables 91-117.								
Dollar Value of a Day: Weekly hours times hourly value divided by seven.								
Secondary Child Care: While performing a primary activity, at least one child under age 13 was in the respondent's care.								
With Family: At least one family member was in the room or accompanied the respondent.								
At Home: The respondent was inside or outside his or her own home.								
Participation Rate: Percent of population reporting at least one daily episode of the activity.								
Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.								
Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal activities, and limited coding while working at job.								

Expectancy Data
Economic Demographers

Table 20. All married retired males, over age 75

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Working Hours			Participation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home		
Inside Housework	1.30	\$10.91	\$2.03	0.01	0.70	1.29	19.3%	7.8%
Food Cooking & Clean-up	2.90	10.83	4.41	0.01	1.87	2.90	38.9	4.5
Pets, Home & Vehicles	7.52	12.78	13.69	0.00	1.55	7.18	43.8	4.0
Household Management	1.97	15.89	4.48	0.00	0.67	1.72	27.8	6.5
Shopping	2.05	12.04	3.63	0.00	1.28	0.01	31.6	5.0
Obtaining Services	0.53	13.78	1.04	0.00	0.25	0.39	3.8	23.2
Travel for Household Activity	1.60	12.48	2.85	0.00	0.87	0.01	38.1	3.4
Household Production	17.87	12.64	32.03	0.02	7.20	13.50	81.7	2.5
Household Children	0.02	11.58	0.03	n/a	0.02	0.02	0.3	53.5
Household Adults	0.78	11.74	1.31	0.00	0.70	0.38	8.7	11.7
Non-Household Members	0.95	11.91	1.61	0.00	0.84	0.21	8.4	12.3
Travel for Household Members	0.21	13.88	0.42	0.00	0.16	0.00	4.3	20.4
Travel for Non-Household Members	0.41	13.88	0.81	0.00	0.27	0.01	8.7	7.0
Caring and Helping	2.37	12.37	4.18	0.00	1.98	0.62	16.5	6.7
Eating & Drinking	10.41	12.11	16.01	0.00	8.69	8.45	98.0	1.4
Personal Health Care	1.83	11.53	3.01	0.00	1.09	0.98	20.5	11.7
Grooming	3.26	11.72	6.45	0.00	n/a	n/a	82.8	2.7
Sleeping	65.11	12.49	118.17	n/a	n/a	n/a	100.0	1.3
Private, Personal, or N/A	2.85	13.17	4.98	0.00	0.88	0.72	30.1	5.5
Personal Time	83.24	12.41	147.81	0.01	19.45	10.15	100.0	1.6
Socializing	5.78	12.99	10.72	0.01	4.61	2.84	42.0	4.3
Passive Leisure	50.17	11.47	82.21	0.06	30.82	49.13	99.1	1.6
Active Leisure	2.14	11.47	3.50	0.00	0.59	0.65	23.3	6.6
Attendance Leisure	0.58	11.47	0.94	0.00	0.47	0.08	3.4	9.0
Religious Activities	1.11	15.41	2.44	0.00	0.84	0.10	10.0	6.6
Volunteering	1.83	15.41	3.80	0.00	0.39	0.51	8.4	9.1
Travel Related to Leisure	2.90	12.48	5.18	0.00	2.03	0.10	45.0	4.4
Leisure	64.31	11.82	108.80	0.07	39.86	53.41	99.7	1.5
Working at Job	0.15	12.40	0.27	0.00	0.00	0.01	0.6	18.1
Educational Activities	0.00	14.87	0.00	0.00	0.00	0.00	0.0	0.0
Commuting to Work or School	0.05	12.48	0.09	0.00	0.02	0.00	0.9	18.7
Work and Education	0.20	12.42	0.36	0.00	0.02	0.01	1.0	24.5
Total	188.00	12.20	292.78	0.10	59.51	77.69		
Size of U.S. Population in 2003-2007	3,123,772				Average Age	79.2		
ATUS Respondents in 2003-2007	755				5th Percentile Age	76		
Sunday Respondents	194				95th Percentile Age	85		
Weekday Respondents	380				Household Size	2.1		
Saturday Respondents	181				Number of Adults	2.1		
					Number of Children under Age 18	0.0		
Definitions								
Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.								
Hourly Value: See tables 91-117.								
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Secondary Child Care: While performing a primary activity, at work children under age 13 were in the respondent's care.								
With Family: At least one family member was in the room or accompanied the respondent.								
At Home: The respondent was inside or outside his or her own home.								
Participation Rate: Percent of population reporting at least one daily episode of the activity.								
Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.								
Note: "Who" and "Where" coding only during waking hours and not coded for sleeping, grooming, some personal activities, and limited coding while working at job.								

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Academic Background:

Doctor of Philosophy, Accountancy, University of Illinois - 1973
Master of Business Administration, University of Illinois - 1969
Bachelor of Science, Electrical Engineering, University of Illinois - 1967
Certified Public Accountant

Academic Positions:

Rice University
The University of Texas at Austin
University of Houston
University of St. Thomas
Houston Baptist University
University of Illinois

Professional Background:

Consultant, Economic Valuation, Business Valuation, Financial Strategy, Mergers
and Acquisitions, Professional Education, Management Information Systems, Cost
Accounting
Partner, Information Services Co., Design and Implementation - Information Systems
Research Assistant,
University Office of Administration Data Processing, University of Illinois
Professor Norton M. Bedford, University of Illinois
Professor H. M. Schoenfeld, University of Illinois
Research Programmer, Agricultural Economics Department, University of Illinois
Field Engineer, International Business Machines
Computer Design Assistant, Illiac IV Project, University of Illinois

Publications:

- "Pfeifer and Culver II: Calculations, Issues and Tactics," Texas Bar Journal, November 1984
- "Pfeifer and Culver II: Guidelines for Fair Awards," Texas Bar Journal, September 1984
- "Calculation of Personal Injury Damages - Two Recent Court Decisions," Texas Trial Lawyers Forum, Oct.-Dec. 1983
- "Experiential Modeling: A Student Simulation Exercise," Proceedings of the Annual Meeting of the American Institute of Decision Sciences, ed., R.J. Ebert, R.J. Monroe, K. J. Roering, 1978
- "Preliminary Evidence of Methodological Problems at Market Extremes," Proceedings of the Southwest Regional Meeting, American Accounting Association, March 1978
- "A Linear Programming Model of University Resource Allocation," Proceedings of the American Institute for Decision Sciences, Seventh Annual Meeting, Western Regional Conference, March 1978
- "Residual Heteroscedasticity as a Determinant of Beta Instability: An Empirical Study," with Gary M. Grudnitski, Proceedings of the Annual Meeting of the American Institute of Decision Sciences, ed., J. D. Stolen and J. J. Conway, 1977
- "The Significance and Impact of Deferred Taxes in a Regulated Environment," with David A. Wilson and Candace F. Wilkinson, Scientific and Behavioral Foundations for Decision Analysis, ed., L. J. Moore and S. M. Lee, 1974
- A Markov Capital Budgeting Model, Ph.D. Dissertation, University of Illinois, 1973
- "Applications of Spectral Analysis," with Richard L. Nolan and Michael Sovereign, Decision Sciences, January 1971

Invited Papers:

- "Methodological Problems of the Market Model in Efficient Markets Research," Faculty Seminar, Jones Graduate School, Rice University, 1980
- "Simulation of a Corporation's Cash Flow Pattern: An Experiment to Determine Users' Ability to Use Forecasting Methodologies," American Institute of Decision Sciences, Ninth Annual Midwest Meeting, May 1978
- "User Standards of Materiality: An Empirical Study," The Accounting Colloquium, The University of Iowa, February 1978
- "An Empirical Study of Materiality," The Accounting Colloquium, The University of Texas at Austin, May 1975
- "A Markov Capital Budgeting Model," The Accounting Colloquium, The University of Texas at Austin, October 1973

Research Publications:

University Office of Administrative Data Processing, University of Illinois, Urbana, Illinois:

"Introduction to the Concepts of Spectral Analysis," 1969

"Spectral Analysis of Inventory Demand Data," 1969

"Analysis of Classroom Scheduling Constraints," with R. P. Amundsen, 1969

"The Determination of Relationships in a System and the Application to Organization Study," 1969

"University Resource Allocation Problem," 1968

Discussant:

"Public and Private Administration of Financial Statement Disclosure in the U.S. and the U.K.," George J. Benston, American Accounting Association Convention, August 1974

Academic Honors:

Beta Alpha Psi

Outstanding Graduate Professor Award, Graduate School of Business, The University of Texas at Austin, 1978

Outstanding Graduate Professor - Nomination, Graduate School of Business, The University of Texas at Austin, 1977

Arthur Andersen & Company Faculty Research Grant, 1976

Academic Development Grants, College of Business Administration, The University of Texas at Austin, 1974 and 1975

Research Grant, Department of Accounting, The University of Texas at Austin, 1974

Ernst & Ernst Doctoral Dissertation Fellowship, 1972 - 1973

Business Development:

Houston Entrepreneurship Council

Rice University Entrepreneurship Program

Direct Business Assistance Program, South Main Center, Houston, Texas

Professional Committees:

**Chairman Emeritus, Cooperation With Attorneys Committee, Texas Society of
Certified Public Accountants, Houston Chapter**

**Chairman Emeritus, Management Advisory Services Committee, Texas Society of
Certified Public Accountants, Houston Chapter**

**Cooperation with Financial Institutions, Texas Society of Certified Public
Accountants, Houston Chapter**

CONSULTING AND WORK EXPERIENCE

Valuation:

- Valuation of damages in personal injury cases
- Valuation of damages in business interruption cases
- Business valuations
- Contract valuations

Financial Strategy and Analysis:

- Analysis and strategy in mergers and acquisitions
- Cash flow forecasts and present values for alternative projects
- Strategy obtaining venture capital
- Loan proposal presentations - pro-formas and cash flow analyses
- Models of internal cost structures
- Design and implementation of financial reporting systems
- Design and implementation of cost accounting systems
- Cost/volume/profit analyses
- Analysis of fixed overhead variance systems
- Financial strategy for new ventures
- Development of business plans
- Financial strategy for business divestiture

Professional Educational Seminars:

- Financial Accounting
- Finance
- Cost Accounting
- Financial Strategy
- Simulation
- Business Valuation
- Real-time Computer Systems
- Mergers and Acquisitions
- Strategic Planning
- Issues in Financial Reporting
- Marketing Strategy
- Financial Analysis for Loan Officers
- Contemporary Issues in Banking

Professional Educational Seminars (cont.):

Market Strategy for CPA Firms
Valuation in Litigation Cases
Cash Budgeting
Issues in Finance
Litigation Support
Loan Analysis for Banks
Business Planning
Accounting for Non-Profit Organizations
Finance for Non-Profit Computer Software Organizations
Computer Technology
Contemporary Issues and Finance and Accounting

Business Development Seminars:

Rice University Entrepreneurship Conference
The Support Center, Management Consulting for Non-Profit Organizations
The University of Texas Medical School
Rice University Office of Executive Development
The Governor's Conference on Entrepreneurship
National Glass Association

Management Information Systems (Software):

Design and implementation - computerized mailing systems
Design and implementation - computerized payroll systems
Design and implementation - interactive cash flow forecasting modeling
Design and implementation - large-scale data bases
Selection of computer software configurations
Educational Consulting - computer software

Management Information Systems (Hardware):

Design of a large-scale parallel processing computer
Repair and maintenance of small to large-scale computer systems
Selection of computer hardware configurations

Inventory Systems:

Statistical analysis of cyclical characteristics of inventory demand
Design and implementation - computerized inventory order and control systems

Simulation:

Computerized simulation of a computer teleprocessing network
Computerized simulation of course scheduling and classroom assignment and utilization
Implementation and augmentation of a large-scale university simulation model

Mathematical Modeling:

Large-scale linear programming modeling for university resource allocation
Large-scale agricultural linear programming modeling - implementation

Statistical Analysis:

Linear Regression
Time Series Analysis
Statistical Sampling
Markov Processes

James P. Mandel, Ph.D., C.P.A.

James P. Mandel, Ph.D., C.P.A.

James P. Mandel, Ph.D., C.P.A.**Testimony**

Case No.	Name	Other Info	Deposition	Trial
2007-06174	Willie Tutt, Raymond D. Carrell, Latonia W. Fury, Michael Hurst, Antonio Williams, Bobbie Hampton, Frederick Bernard Johnson, Matt Pledger, Fletcher Collins, Zimbalust McCoy v. Shell Oil Company, Port of Houston Authority International Corporation and Brand Scaffold Builders, LLC	In the 165th Judicial District Court of Harris County, Texas	*	
2007-48513	Kenneth R. Ervin and Teri Ervin v. Williams Brothers Construction Co., Williams Brothers Highway Maintenance Company, LL and Morris G. Allen	In the 215th Judicial District Court of Harris County, Texas		*
2007-20572	Roberta J. Burkhart vs. Victor N. Loftin, Dacon Corporation, Dacon Ltd., InfraSource Dacon LLC, Dashiell Ltd. and Infrsource Dashiell, LLC	In the 80th District Court of Harris County, Texas	*	
C200800125	Morris S. Tawater Plaintiff, vs. Union Pacific Railroad Company; Raudin McCormick, Inc.; William Edward Chadwick, and Fred L. Brown Defendants	In the District Court of Johnson County, Texas 413th Judicial District	*	
07CV1304	Warren J. Dupre, et al. vs. The Offshore Drilling Company, et al.	In the 405th District Court of Galveston County, Texas	*	
2007-06174	Jose Lopez, Jr. and Veronica Lopez v. Shell Oil Company, et al	In the 133rd District Court of Harris County, Texas	*	
CJ-2008-5368	David Hutcherson vs. John W. Anderson, M.D., and Orthopedic Associates, Inc.	In the District Court of Oklahoma County, State of Oklahoma	*	
08-08-23763-MCVAJA	Alberto A. Riojas vs. Union Pacific Railroad Company	In the 365th District Court of Maverick County, Texas	*	
2007-20572	Robert Burkhart vs. Victor N. Loftin, Dacon Corporation, Dacon Ltd., Infrsource Dacon, LLC, Dashiell Ltd., and Infrsource Dashiell, LLC	In the 80th Judicial District Court of Harris County, Texas		*
374,963-401	In the Guardianship of Manuel Armando Hernandez, an Incapacitated Person	In the Probate Court Number 1 of Harris County, Texas	*	
2005-70124	Alicia Dianne West v. The Icarus Line, Inc., et al.	In the 133rd Judicial District Court of Harris County, Texas	*	

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CJ-08-238	Lorrain Bacon, Individually and as Surviving Spouse and as Personal Representative of the Heir and the Estate of Fred W. Bacon, Deceased, and on behalf of all wrongful death Beneficiaries v. Ametek, Inc., successor in interest to Haveg Industries, Inc., et al.	In the District Court for McIntosh County, State of Oklahoma	*	
09-CV-0271	Temple Drennan and Jenifer Drennan vs. Southern Trucking, Inc.; Roberto Gonzalez; Patco Contractors, Inc.; PDM Transport, Inc. d/b/a Montgomery Truck Lines; PDM Transport Leasing, Inc; and the Texas Department of Transportation	In the 10th Judicial District Court of Galveston, Texas	*	
2008-27699	Rose Baker vs. Charles Transports & Associates, L.L.C., Michael Clark; and Howard Allen Smith	In the 189th Judicial District Court of Harris County, Texas		*
2009-11635-ASB	Lena Jarvie, Individually And As Personal Representative of Heirs of James Graham Jarvie and David Jarvie and Sue Ellen Hall vs. Dow Chemical Company, et al.	In the District Court of Harris County, Texas 11th Judicial District	*	
2008-36829	Dylan Clewis vs. Airtime Amusements, Inc.	In the 165th Judicial District Court of Harris County, Texas	*	
4:09-cv-02743	Caroline Zinner Parker vs. Pulte Homes of Texas, L.P.	In the United States District Court for the Southern District of Texas Houston Division		
46900	Tommy Attkisson, Next Friend of Jordan Taylor and Ron Lynch, Jr., Individually and Candice Lynch, Individually and as Representative of The Estate of Ester Sullivan, Deceased vs Big Creek Construction, Ltd., Jose Rodolfo Aguado, and Stacey Perez	In the 166th Judicial District Court of Hill County, Texas	*	
2009-54488	Larry E. Potter v. National Advertising Company, CBS Outdoor Inc.	In the District Court of Harris County, Texas 270th Judicial District	*	*
29356	Larry Tidwell and Nancy Tidwell vs. Terex Company, et al	In the 149th Judicial District Court of Brazoria County, Texas		*
2009-37869-ASB	Bonnie Thiele, Individually and as Personal Representative of the Estate of Floyd Thiele, deceased, and on Behalf of All Wrongful Death Beneficiaries vs. Ametek, Inc. et al	In the Multidistrict Asbestos Litigation Court of Harris County, Texas	*	*
2009-30277	Lewis W. Cowart v. Noble Energy, Inc.	In the District Court of Harris County, Texas 270th Judicial District	*	*
2006-38864-A	Before the Asbestos MDL Pre-Trial Judge; Tammy Joan Helms Vaughn, Individually And On Behalf of The Estate of Clarence R. Helms, Deceased, And On Behalf of All Wrongful Death Beneficiaries vs. A.C.&S., Inc. et al	In the 126th Judicial District Court; District Court of Travis County, Texas	*	

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2010-31748	John Little v. Speedy Stop Food Stores, LLC	In the 113th Judicial District Court of Harris County, Texas	*	
DC-11-04797-L	Clyde E. Crumpton vs. BNSF Railway Company	In the 193rd Judicial District Court In and For Dallas County, Texas	*	
C2009007330	Franklin A. Raso v. Jody G. Chancell, et al	In the 249th District Court of Johnson County, Texas	*	
4:10-cv-2552	Bernard Joseph Rullian v. New Prime, Inc., d/b/a Prime Inc. and Janjee A. Johnson	In the United States District Court for the Southern District of Texas, Houston Division	*	
4643H	Harlan Anderson v. BNSF Railway Company	In the 69th Judicial District Court in and for Hartley County, Texas	*	*
63935-C	William Keith Reasoner v. BNSF Railway Company	In the 251th Judicial District Court in and for Randall County, Texas	*	
2010-49733	Gerald Thompson vs. Union Pacific Railroad Company and Brad Lee Robbins	In the District Court of Harris County, Texas 190th Judicial District	*	
2010-20715	Campbell v. Kroger	In the District Court of Harris County, Texas 127th Judicial District	*	
55680	Herlinda Mijes, Individually and as Personal Representative of the Estate of Eric Mijes vs. Tex Flow Services, Inc. and Stanley Lott	In the 239th Judicial District Court, Brazoria Texas	*	
10-04-21,519	William R. Nami vs. Union Pacific Railroad Company	In the District Court of Dewitt County, Texas, 267th Judicial District	*	
11-04-26425-MCVAJA	Miguel Mendez v. Union Pacific Railroad Company	In the 365th Judicial Distric Court of Maverick County, Texas	*	
2011-39873	Willie Alexander vs. Hercules Offshore, Inc.	In the District Court of Harris County, Texas 151st Judicial District	*	
2010-28382	Yasameen Sardari vs. Goodman Huang Hospitality I LTD., et al	In the District Court of Harris County, Texas 151st Judicial District	*	
2011-45711	Cardelario Sanchez, As Next Friend of Franco Sanchez v. Southern Pan Services Company and Hardin Construction Companyu, LLC	In the 55th District Court of Harris County, Texas	*	
4:10-cv-03333	In the Estate of Darren Thomas Marksberry, Jr., Deceased	In the United States District Court for the Southern District of Texas, Houston Division	*	
C201100510	Gary Scott Harris and Stephanie Harris, Individually and as Next Friends for Emily Harris and Christopher Harris, Minors, Sandra Harris and Gary Harris vs. Tuttle & Tuttle Trucking, Inc., Michael Lovvorn, and Michael LaFountain	In the District Court Johnson County, Texas 18th Judicial District	*	*
2011-37299	Alex Supulvado vs. Amy South	In the District Court Harris County, Texas 125th Judicial District		*
D-101-CV-2011-02741	Manuel Acosta Vs. BNSF Railway Company	State of New Mexico, County of Santa Fe, First Judicial District	*	*
No. 3:11-CV-00463	John Ledwig and Janell Ledwig v. Adam Naquin and Acme Truck Line, Inc.	In the United States District Court, southern District of Texas, Galveston Division	*	

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